

Claims

1) Thermoplastic moulding compositions of the ABS type containing

5 A) at least one elastic-thermoplastic graft polymer obtained by radical emulsion polymerization of resin-forming vinyl monomers in the presence of rubber present in latex form with a glass transition temperature $\leq 0^{\circ}\text{C}$ using an initiator combination comprising a specific azo compound and a persulfate compound and

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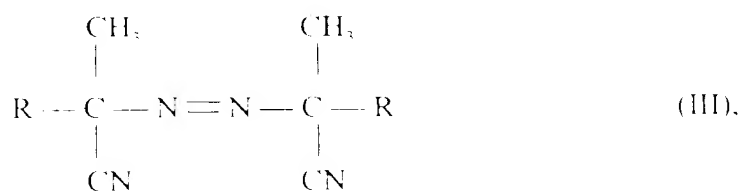
B) at least one copolymer comprising styrene and acrylonitrile and optionally further co-monomers.

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characterized in that the graft polymer A) is produced by feed of the monomers to the rubber latex, at the start of the graft polymerization reaction the specific azo compound is added in quantities of 0.2 to 3 wt. % (related to the monomers metered in up to the time of the persulfate compound addition), after a monomer addition of 10 to 95 wt. % (related to total monomer quantity) a persulfate compound is added in quantities of 0.05 to 1.5 wt. % (related to the monomers metered in from the time of the persulfate compound addition) and the polymerization is brought to an end, wherein a compound of formula (III)

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where R = CH_3 , C_2H_5 , C_3H_7 , C_4H_9 .

wherein the isomer groups n- C_3H_7 -, i- C_3H_7 -, n- C_4H_9 -, i- C_4H_9 -, t- C_4H_9 are included,

or a mixture thereof is used as azo compound.

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2. Thermoplastic moulding compositions according to Claim 1, characterized in that component A) is contained in quantities of 10 to 80 wt.%,

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3. Thermoplastic moulding compositions according to Claim 1, characterized in that the rubber according to Component A is a mixture of at least two rubber latices with

a) an average particle diameter $d_{50} \leq 320$ nm and a gel content ≤ 70 wt.% and

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b) an average particle diameter $d_{50} \geq 370$ nm and a gel content ≥ 70 wt.%.

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4. Thermoplastic moulding compositions according to Claim 1, characterized in that the elastic-thermoplastic graft polymer A) has a rubber content of 20 to 80 wt.%.

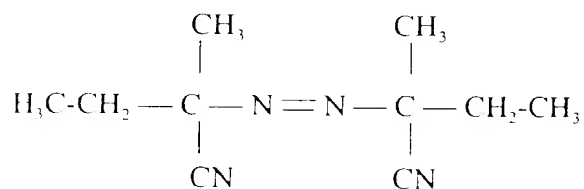
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5. Thermoplastic moulding compositions according to Claim 1, characterized in that the resin-forming monomers in the production of the graft polymer A) are styrene and acrylonitrile.

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6. Thermoplastic moulding compositions according to Claim 1, characterized in that in the production of the graft polymer A), polymerization takes place before addition of the persulfate compound with no addition of molecular weight regulators and polymerization takes place after addition of the persulfate compound with addition of molecular weight regulators.

7. Thermoplastic moulding compositions according to Claim 1, characterized in that the compound



is used as azo compound to produce the graft polymer A).

8. Thermoplastic moulding compositions according to Claim 1, characterized in that potassium peroxodisulfate is used as persulfate compound for the production of the graft polymer A).

9. Thermoplastic moulding compositions according to Claim 1, characterized in that the co-polymer B) is composed of monomers selected from styrene, α -methylstyrene, acrylonitrile, methyl methacrylate, maleic anhydride, N-phenylmaleinimide or mixtures thereof.

10. Thermoplastic moulding compositions according to Claim 1, additionally containing at least one resin selected from the polycarbonates, polyester carbonates, polyesters and polyamides group.

11. Process for producing rubber-containing graft polymers by emulsion polymerization using an initiator combination comprising an azo compound and a persulfate compound, wherein

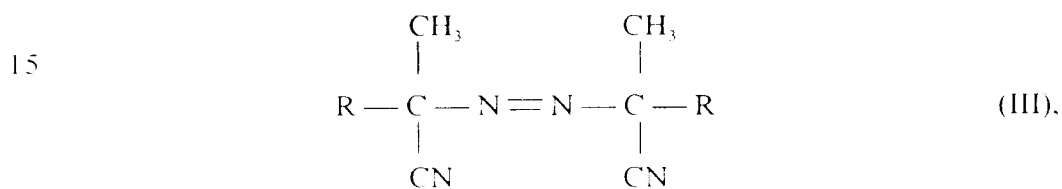
- i) the graft monomers are metered into the rubber latex.

ii) the azo compound is added at the start of the graft polymerization reaction in quantities of 0.2 to 3 wt.% (related to the monomers metered in up to the time of the persulfate compound addition),

5 iii) after a monomer addition of 10 to 95 wt.% (related to the total monomer quantity) a persulfate compound is added in quantities of 0.05 to 1.5 wt.% (related to the monomers metered in from the time of the persulfate compound addition) and

10 iv) the polymerization reaction is brought to an end,

wherein a compound of formula (III)



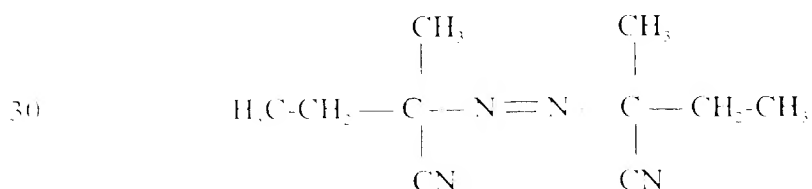
20 in which

R stands for CH_3 , C_2H_5 , C_3H_7 , C_4H_9 , and their isomer groups,

is used as azo compound.

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12. Process according to Claim 11, wherein the following compound



is used as azo compound.

13. Use of the thermoplastic moulding compositions according to Claims 1 to 10 to produce moulded parts.

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14. Moulded parts, produced from thermoplastic moulding compositions according to Claims 1 to 10.